

AMENDMENTS TO THE CLAIMS

1. (withdrawn) The method of building a tire carcass on a first stage tire building drum comprises the steps of:
 - applying unvulcanized tire building components on the first stage tire building drum to form a cylindrically shaped unvulcanized tire carcass having carcass ends;
 - placing a pair of tire apex and bead subassemblies in parallel relation around the first stage drum in spaced relation from the cylindrical tire carcass thereon, such that the carcass ends of the tire carcass extend laterally beyond the apex and bead subassemblies;
 - locking the beads by radially expanding bead lock mechanisms forcing the carcass into engagement with the beads; moving the carcass radially outwardly between the bead locks by radially expanding a central segment support mechanism including a plurality of central support segments that are covered by an inflatable pair of turnup bladders while simultaneously axially inwardly moving the pair of bead locks;
 - turning up the tire carcass ends following a radially outward extending contour at least halfway along the apex and bead subassemblies to an axially inwardly extending end;
 - stitching the turnups to form a partially radially extending turnup.
2. (withdrawn) The method of claim 1 further comprises inflating through the central segment support mechanism to toroidally shape the carcass.
3. (withdrawn) The method of claim 1 wherein the step of moving the carcass radially outwardly between the bead locks includes moving the segments a distance D, D being at least 30 mm.

4. (withdrawn) The method of claim 3 wherein each of the bead locks moves a distance axially inwardly equal to the radial movement of the central support segments.

5. (presently amended) A tire building drum having a right hand side and a left hand side, the tire building drum comprising:

a central screw;

a pair of inflatable turnup bladders,

a central segment support mechanism having a plurality of radially expandable segments, said radially expandable segments having cam followers in engagement with cam surfaces of a cone mechanism, wherein the cone mechanism is actuatable independently of said central screw; and

a pair of support rings, each support ring being positioned between the radially expandable segments and a bead lock, wherein as the segments expand and the bead locks move axially inwardly, the support rings move under the segments,

a pair of bead locks, each bead lock being mounted on axially movable housings threadedly connected to the central screw and actuated axially-movable upon in response to rotation of the central screw.

6. Canceled

7. Canceled

8. Canceled

9. Canceled

10. (new) A tire building drum having a right hand side and a left hand side, the tire building drum comprising:

a central screw;

a central segment support mechanism having a plurality of radially expandable center support segments, said radially expandable segments having cam followers in

engagement with cam surfaces of a cone mechanism, wherein the cone mechanism is actuatable independently of said central screw , and

a pair of bead locks, each bead lock being mounted on axially movable housings threadedly connected to the central screw and actuatable by rotation of the screw.

11. (new) A tire building drum having a right hand side and a left hand side, the tire building drum comprising:

a central screw;

a central segment support mechanism having a plurality of radially expandable center support segments, said radially expandable segments having cam followers in engagement with cam surfaces of a cone mechanism, wherein the cone mechanism is actuatable independently of said central screw and wherein the cone mechanism is located along a center plane of the drum transverse to the longitudinal axis, and

a pair of bead locks, each bead lock being mounted on axially movable housings.

12. (new) The tire building drum of claim 11 wherein the housings are threadedly connected to the central screw and actuatable by rotation of the screw.

This listing of claims will replace all prior versions and listings of claims in the application.